

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking on the  
Commission's Own Motion to Adopt New  
Safety and Reliability Regulations for Natural  
Gas Transmission and Distribution Pipelines  
and Related Ratemaking Mechanisms

R.11-02-019  
(Filed February 24, 2011)

**PACIFIC GAS AND ELECTRIC COMPANY'S SUPPORTING  
INFORMATION FOR LIFTING OPERATING PRESSURE  
RESTRICTIONS ON THE SUCTION SIDE OF TOPOCK  
COMPRESSOR STATION**

**HEARING DOCUMENTS**

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September 19, 2011

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Pursuant to Decision (D.)11-09-006, Pacific Gas and Electric Company (PG&E) appeared on September 19, 2011 before Administrative Law Judge (ALJ) Maribeth Bushey, Assigned Commissioner Florio and Commissioner Simon to present its Supporting Information for the restoration of operating pressure on the suction side of the Topock Compressor Station (Topock). PG&E's Supporting Information, consisting of five exhibits (A through E), previously filed and served on the parties. The Supporting Information was sponsored by testimony of PG&E Vice President Jane Yura, PE. During the hearing, Vice President Yura distributed to parties present and discussed three additional documents attached hereto and described below which ALJ Bushey directed be served on all parties in this proceeding. Pursuant to that directive, PG&E submits and serves the following three hearing documents on all parties:

**1. Aerial and Station Piping Photograph**

In response to a question from ALJ Bushey for information regarding the approximate location of the Topock Compressor Station, PG&E presented an aerial photograph showing the location of Topock along the Colorado River at the Arizona-California border. The aerial

photograph, taken in approximately 2005, shows the location of the three transmission lines, El Paso Lines 300A and 300B and the Transwestern pipeline, which serve Topock.

On the reverse side of the aerial photograph is a picture showing the flanged connections in Section "B" of the Topock hydrostatic test.

## **2. Topock Suction Line Hydro Test Segments Table**

As described in PG&E Exhibits A and B, to hydro test Topock, the suction side of the station was divided into eleven segments. For each of these eleven segments, the table distributed at the hearing shows, in successive columns, (1) the maximum operating pressure (MOP), (2) the minimum required pressure during the test to establish the MOP for each segment, (3) the minimum indicated pressure during the test of that segment, (4) the ratio of hydro test pressure (HTP) to maximum operating pressure (MOP), (5) the percent that the test pressure for each segments represents of the Specified Minimum Yield Strength (SMYS) for that segment, and (6) the percent that the restored MOP for each segment will represent to the SMYS of that segment.

## **3. Errata to PG&E Supporting Information filed September 12, 2011**

The third hearing document consisted of a one-page errata and two additional exhibits (F and G). Exhibit F provides a list of the repair actions taken as a result of pressure testing the suction piping on the A side of Topock and Exhibit G is a list of the repair actions taken as a result of suction pipe pressure testing on the B side of Topock. Each exhibit includes photographs to illustrate the location of the flange that was tightened or gasket that was replaced.

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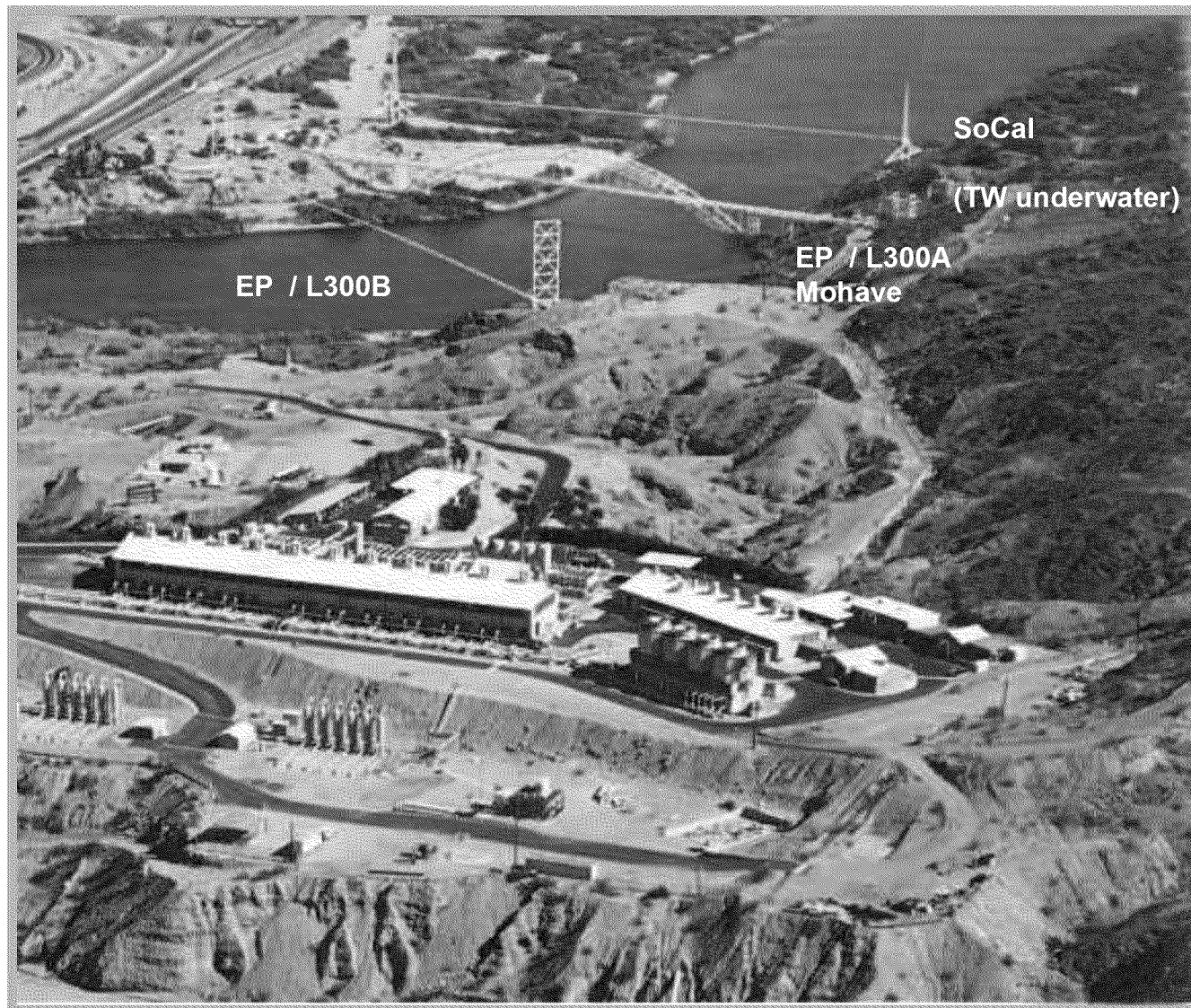
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# Topock Compressor Station and Pipeline River Crossings

*(View from California side, approximately 2005)*



**Topock Compressor Station HydroTest "B" section**  
*(Flanged connections)*



**TABLE**  
**Topock Suction Line Hydro Test Segments**

Test ID	Test Segment Description	MOP	Minimum Req'd Pressure at Test Point to establish MOP	Minimum Indicated test pressure at Test Point	HTP/MOP	%SMYS at Test Pressure	% SMYS at MOP
<b>A1</b>	Suction piping from closed Station Inlet Valves A-1 and A-3, and A-5; to blind flanges at removed Suction Lateral Valves A-7, A-11, A-15, A-19, A-23 & A-27 (upstream flange side of Valves); to closed Valve AB-1; to blind flanged Valves G & H.	660psig	993 psig	1182 psig	1.79	64.8%	36.2%
<b>A2-1</b>	Suction line piping from blind flanges at removed Suction Lateral Valves A-11, A-15 & A-19 (downstream flange side of Valves); through Scrubbers 2A, 3A & 4A; to closed Valves A-13, A-17 & A-21.	660 psig	1000 psig	1152 psig	1.75	52.7%	30.1%
<b>A2-2</b>	Suction line piping from blind flanges at removed Suction Lateral Valves A-7, A-23 & A-27 (downstream flange side of Valves); through Scrubbers 1A, 5A & 6A; to closed Valves A-9, A-25 & A-29.	660 psig	1000 psig	1153 psig	1.75	52.7%	30.1%
<b>A3</b>	Suction piping from closed Valves A-5, FG-1, A-9, A-13, A-17, A-21, A-25 & A-29; to closed Valve AB-3; to blind flanges at removed Unit pulsation bottles and Unit Bypass Valves at K-2, K-3, K-4, K-5 & K-6; and blind flange at removed Valve A-41 (Unit K-1).	660 psig	1005 psig	1401 psig	2.12	72.8%	34.3%
<b>A-side Suction Bottles</b>	Chain suction bottles from Units K-5 and K-6 together, blind flanges, and test in parallel.	660 psig	992 psig	1402 psig	2.12	72.8%	34.3%
<b>B1</b>	Suction piping from closed Station inlet Valves B-1 & B-3; to blind flanges in place of removed Scrubber Lateral Valves B-7, B-11, B-15, B-19, B-23 and B-27 (upstream flange side of valves); to closed Valve AB-1; to blind flanged Valves J and N.	660 psig	1006 psig	1200 psig	1.82	68.6%	37.7%

**TABLE (Con't)**

**Topock Suction Line Hydro Test Segments**

<b>Test ID</b>	<b>Test Segment Description</b>	<b>MOP to be established</b>	<b>Minimum Req'd Pressure at Test Point to establish MOP</b>	<b>Minimum Indicated Test Pressure at Test Point</b>	<b>HTP/MOP</b>	<b>%SMYS at Test Pressure</b>	<b>%SMYS at MOP</b>
<b>B2-1</b>	Suction piping from blind flanges at removed Scrubber Lateral Valves B-7 and B-15 (downstream flange side of Valves); through Scrubbers 1B and 3B, to closed Valves B-9 and B-17.	660 psig	1001 psig	1200 psig	1.82	54.9%	30.1%
<b>B2-2</b>	Suction piping from blind flanges at removed Scrubber Lateral Valves B-19 and B-27 (downstream flange side of Valves); through Scrubbers 4B and 6B, to closed Valves B-21 and B-29	660 psig	1001 psig	1180 psig	1.79	53.9%	30.1%
<b>B2-3</b>	Suction piping from blind flanges at removed Suction Lateral Valves B-11 and B-23 (downstream flange side of Valves); through Scrubbers 2B and 5B, to closed Valves B-13 and B-25.	660 psig	1001 psig	1182 psig	1.79	53.9%	30.1%
<b>B3</b>	Suction piping from closed Valves B-9, B-13, B-17, B-21, B-25, and B-29 to closed Valve AB-3; to blind flanges at remove pulsation bottles and Unit Bypass Valves at K-7, K-8, K-9 and K-10.	660 psig	994 psig	1360 psig	2.06	70.7%	34.3%
<b>B-side Suction Bottles</b>	Chain suction bottles from Units K-7 and K-8 together, blind flanges, and test in parallel.	660 psig	991 psig	1370 psig	2.08	71.1%	34.3%



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**ERRATA TO SUPPORTING INFORMATION  
FILED: SEPTEMBER 12, 2011**

Exhibit A.  
Volume 1 of 3  
Witness: Jane Yura

<b>Page(s)</b>	<b>Delete</b>	<b>Replace With/Insert/or Explanation</b>
5	The upstream portions of Lines 300A and 300B also had MOPs and MAOPs of 660 psig.	The upstream portions of Lines 300A and 300B also had MOPs of 660 psig while the MAOP of Lines 300A and 300B are 700 psig and 660 psig, respectively.
6	The findings and actions taken by PG&E as a result of the pressure testing are also found in Exhibits A and B.	The findings and actions taken by PG&E as a result of the pressure testing of side A and B of the Topock Compressor Station are found in Exhibits F and G respectively.
6	After the hydro tests, the leaking components were either tightened or had their rubber gaskets replaced. . . .	After the hydro tests, the leaking components were either tightened or had their glass epoxy-nitrile elastomer gaskets replaced. . . .

Exhibit B.  
Volume 2 of 3  
Witness: Jane Yura

<b>Page(s)</b>	<b>Delete</b>	<b>Replace With/Insert/or Explanation</b>
B-70	Delete duplicate page.	Two copies of page B-70 were included in error.

## Topock Compressor Station

### Repair actions taken as a result of pressure testing

Topock Suction Piping Hydrotest leak and repair summary –“A side testing”		AECOM
Photo #	Location	Methodology of capturing leaks and repairs done
<b>A-1 Test</b>		
1	A1 Valve insulating flange	Leak discovered 1 hr 15 min into test as insulating flange was partially excavated. Leak from bottom of insulating flange. Excavation during test to pursue leak source. Leaking water channeled into kiddie pool and pumped back into Baker tanks. Insulating flange spread apart, existing gaskets removed and new gasket installed.
<b>A-2 Tests</b>		
2	Scrubber 1A line - 16" flanged connection immediately after meter element	Leaking water captured in kiddie pool. Existing gasket removed and replaced with new gasket. Scrubber 1A line subsequently included in A2-2 hydrotest.
3	Scrubber 2A line - 16" flanged connection immediately after meter element	Leaking water captured in kiddie pool. Existing gasket removed and replaced with new gasket.
4,5	Scrubber 3A line - Union above relief valve and 16" flanged connection at scrubber inlet.	Leaking water captured in bucket and kiddie pool, respectively. Union and 16" flanged connections torqued.
6,7,8	Scrubber 4A line - 16" orifice meter, sight glass union, and vertical 16" flanged connection at top of scrubber.	Leaking water captured in bucket and kiddie pool. Orifice meter existing gasket removed and new gasket installed. Union and 16" flanged connection torqued.
8,9	Scrubber 5A line - 16" vertical flanged connection at top of scrubber, sight glass union	Leaking water captured in a bucket. Union and 16" flanged connection torqued.
<b>A-3 Test</b>		
10	K5 suction valve - flanged connection	Leaking water captured in a kiddie pool. Flanged connection torqued.

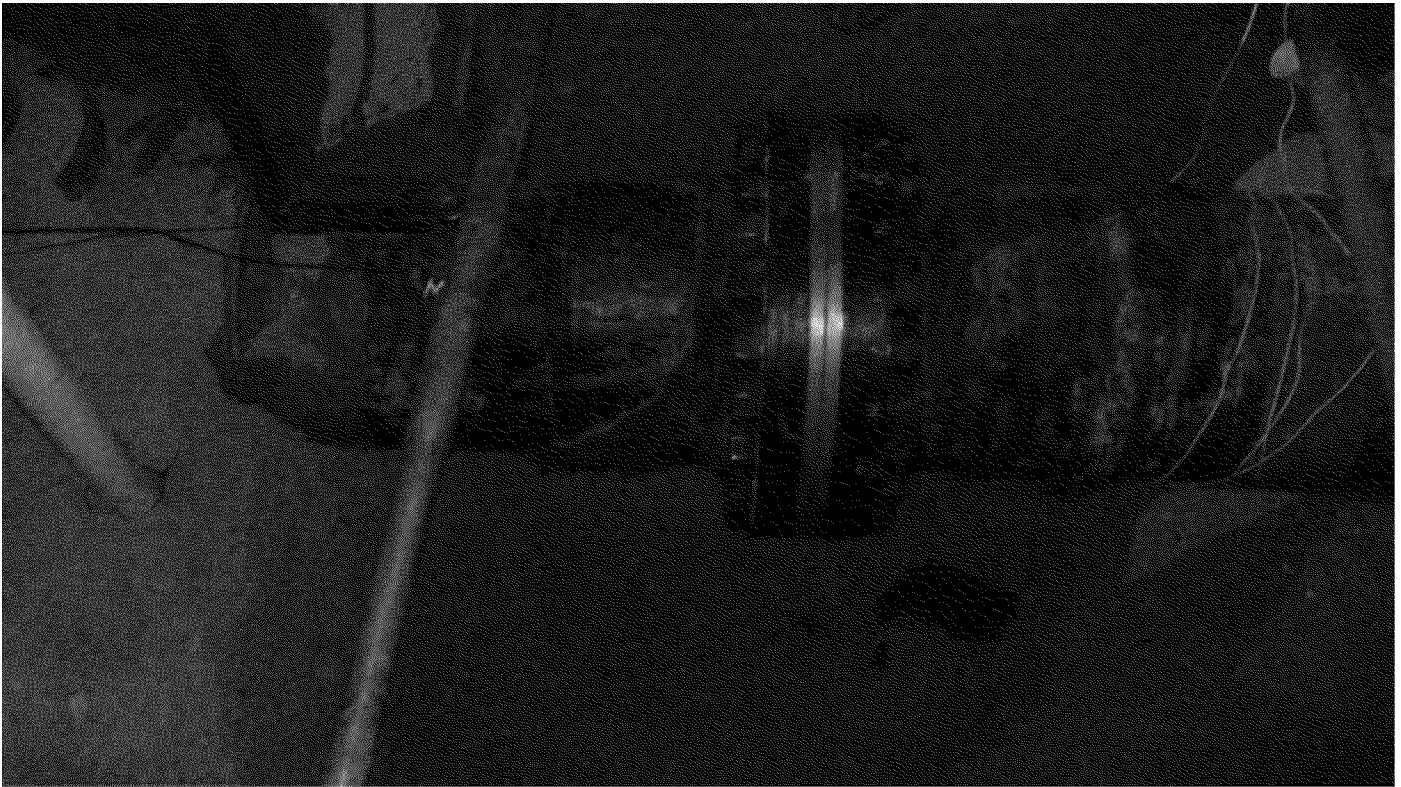


Photo #1 - A1 Valve Insulating flange

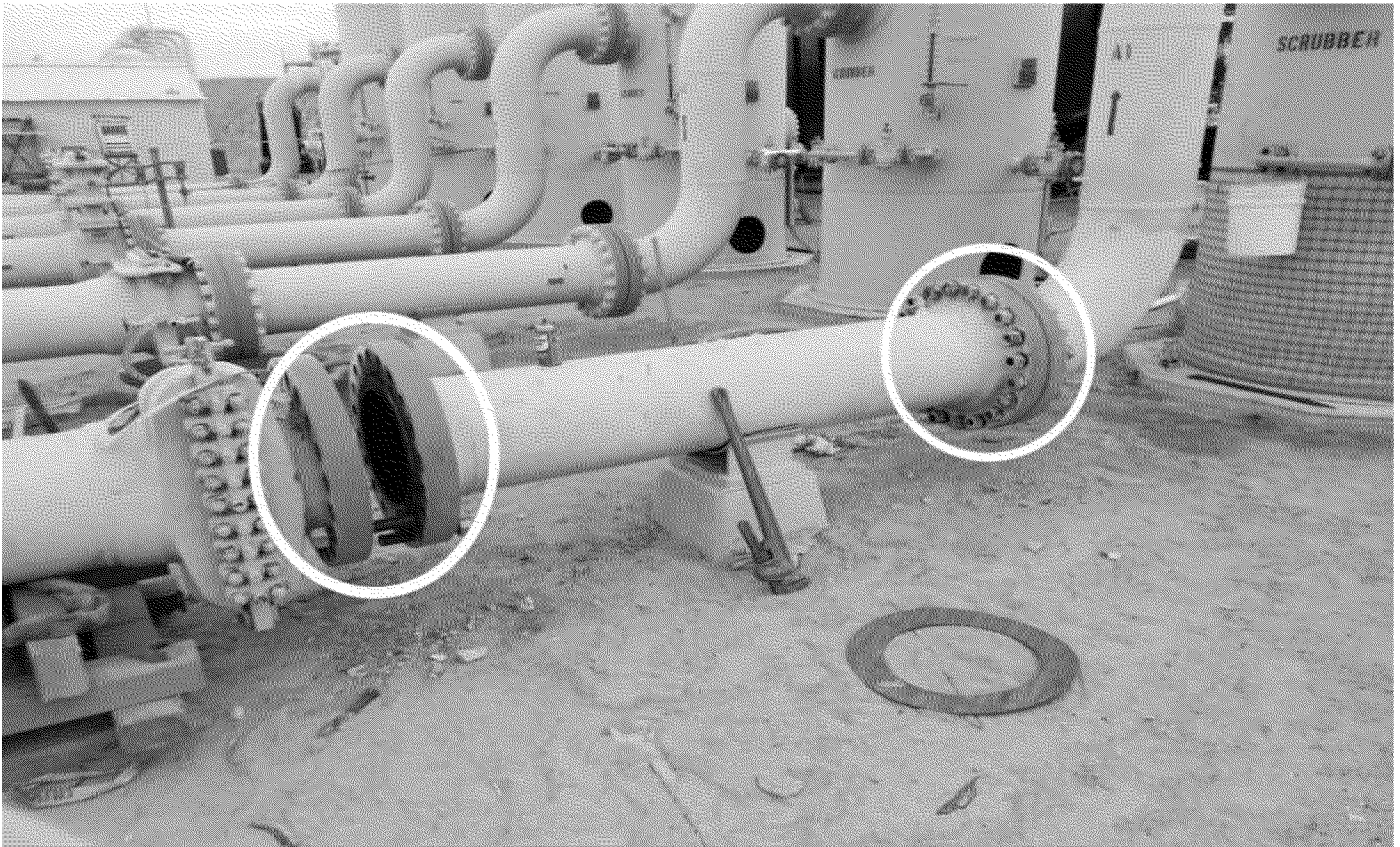


Photo #2 – 1A Scrubber line 16” flanged connection



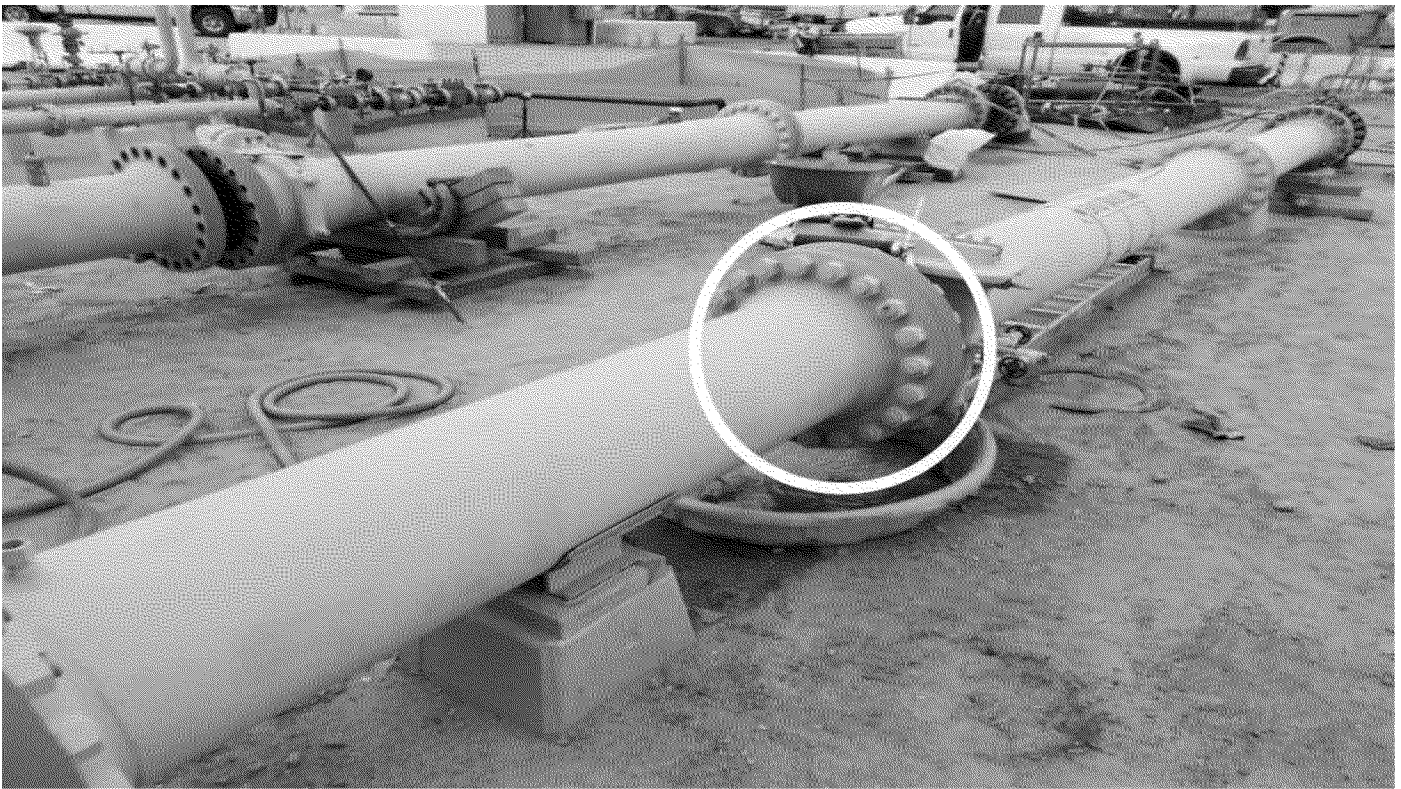


Photo # 3 – 2A Scrubber line 16” flanged connection

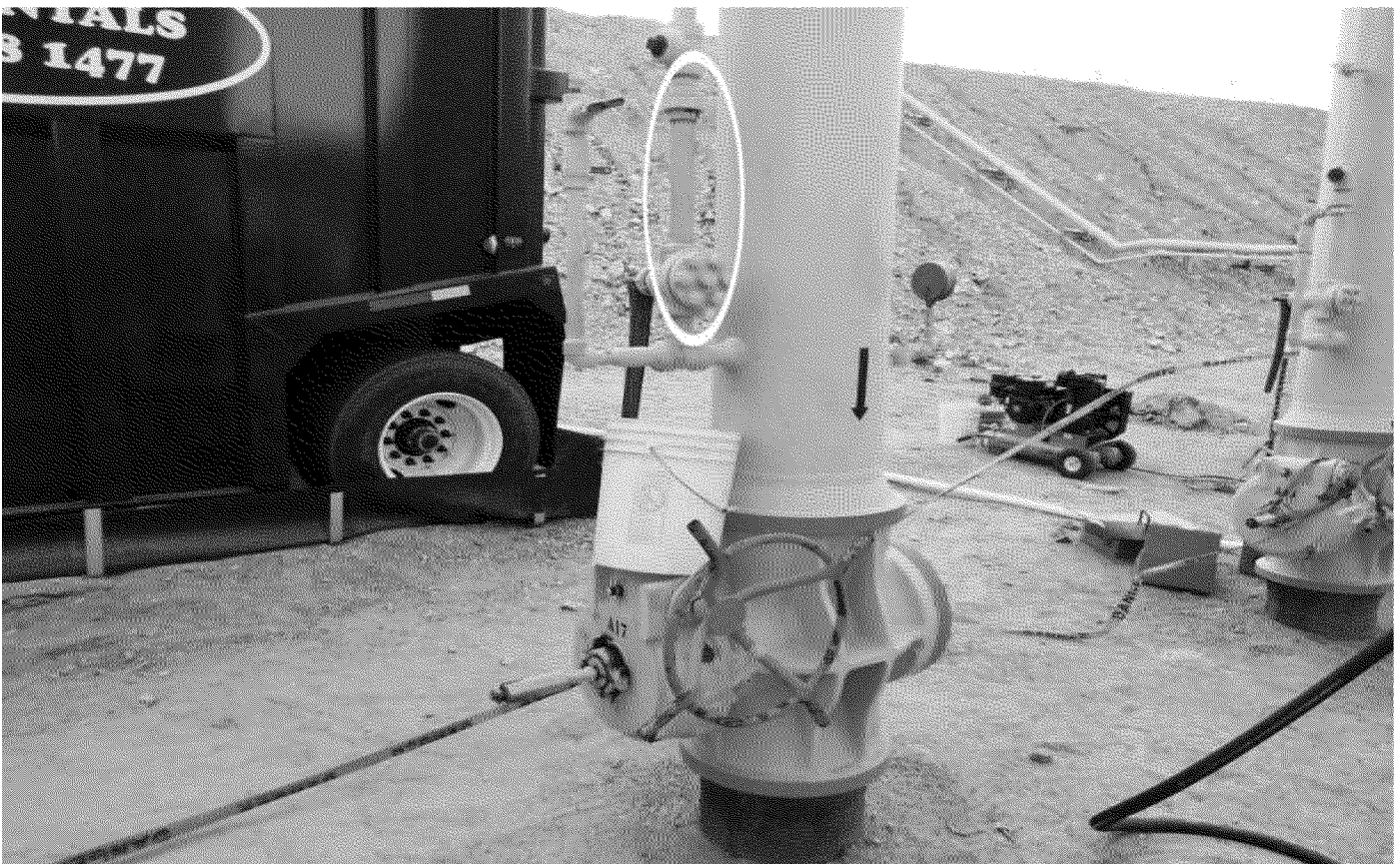


Photo #4 – 3A Scrubber line relief valve union





Photo #5 – 3A Scrubber line 16” flanged connection

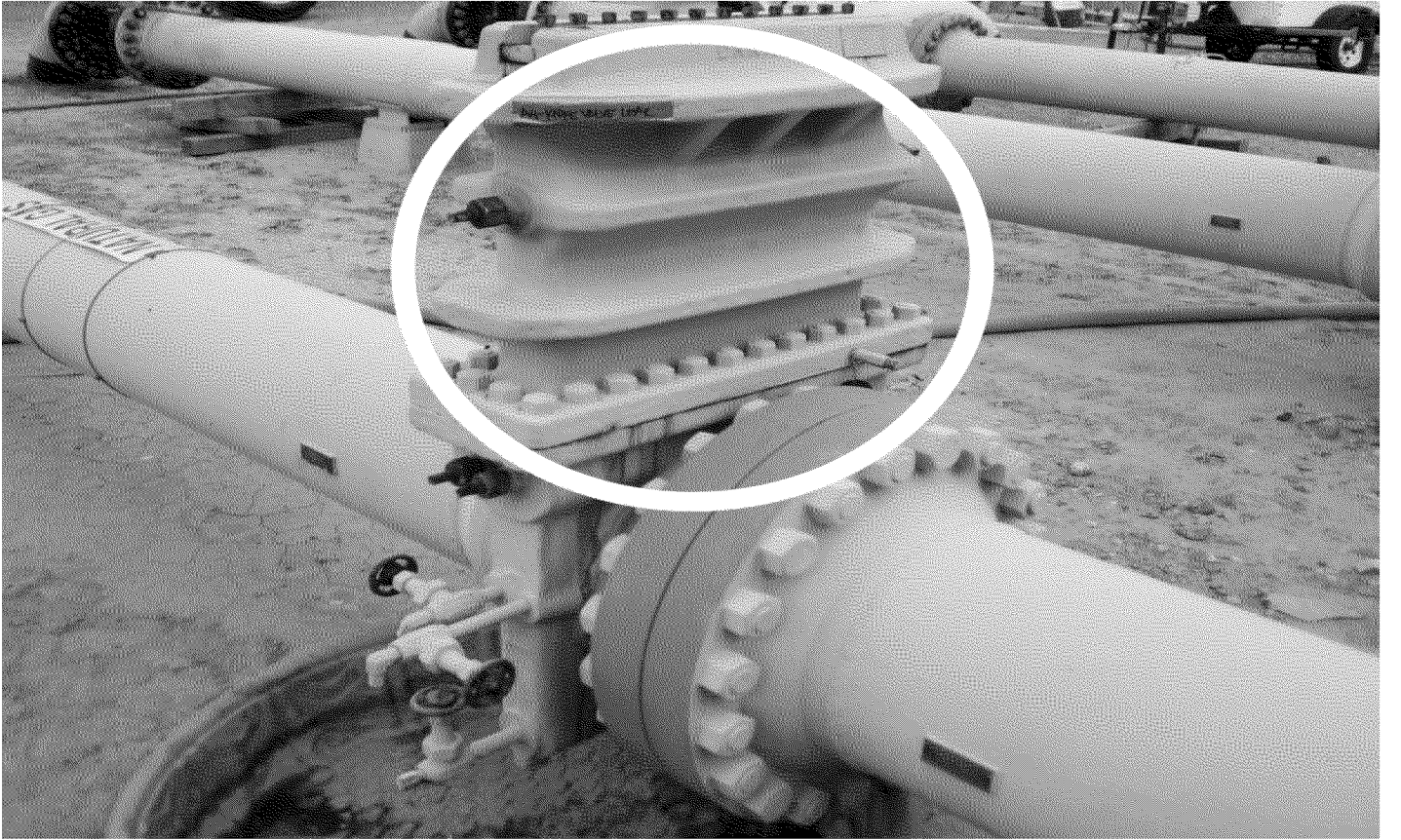


Photo #6 – 4A Scrubber line orifice meter



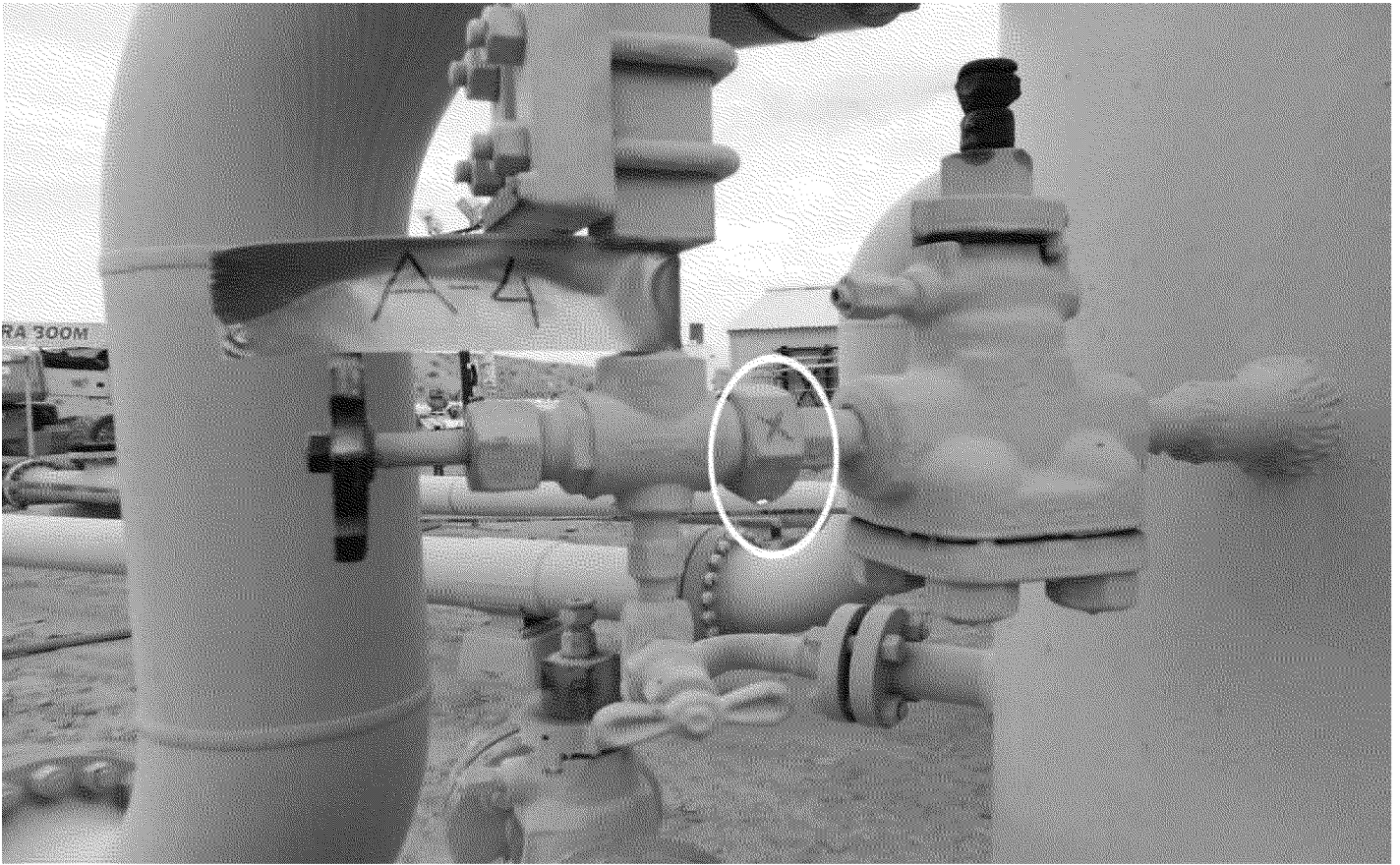


Photo #7 – 4A Scrubber line sight glass union



Photo #8 – 4A and 5A Scrubber lines 16" flanged connections





Photo #9 – 5A Scrubber line sight glass union

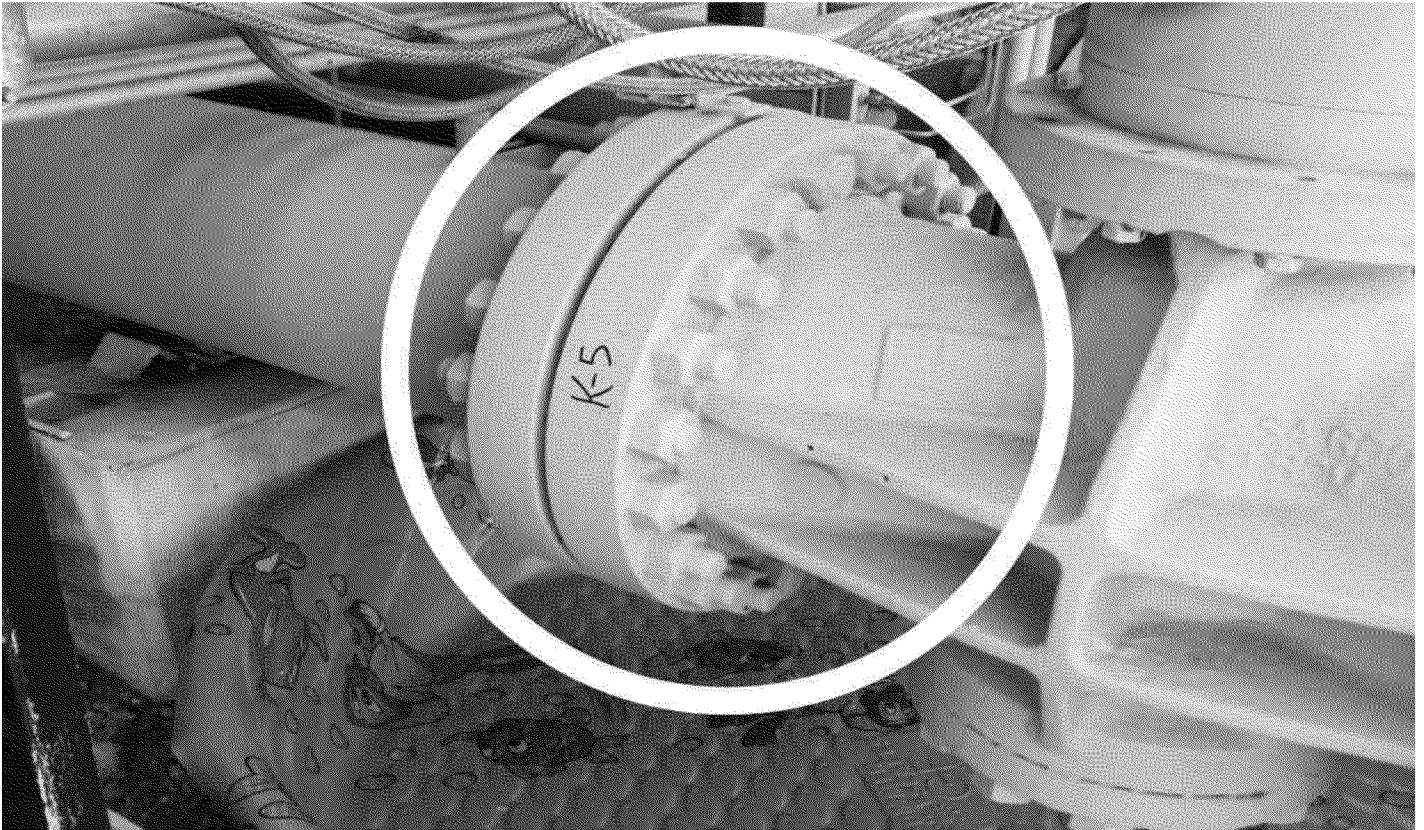


Photo #10 - K5 suction valve flanged connection

## Topock Compressor Station

### Repair actions taken as a result of pressure testing

<b>Topock Suction Piping Hydrotest leak and repair summary "B side testing"</b>		<b>AECOM</b>
Photo #	Location	Methodology of capturing leaks and repairs done
<b>B-1 Test</b>		
11	B1 valve insulating flange	Leaking water captured in a kiddie pool. Insulating flange spread apart, existing gaskets removed and new gasket installed.
12	B3 valve insulating flange	Leaking water captured in a kiddie pool. Insulating flange spread apart, existing gaskets removed and new gasket installed.
<b>B-2 Tests</b>		
13	Scrubber 1B line – 16" flanged connection east of B7 valve, orifice meter	Leaking water captured in a kiddie pool. 16" flanged connection gasket removed and new gasket installed. Orifice meter existing gasket removed and new gasket installed.
13,14	Scrubber 2B line - 16" flanged connection immediately after orifice meter	Leaking water captured in kiddie pool. Existing gasket removed and replaced with new gasket. Scrubber 2B line subsequently included in B2-3 hydrotest.
15	Scrubber 5B line - 16" vertical flanged connection at top of scrubber	Water captured in plastic containment at base of scrubber. Existing gasket removed and replaced with new gasket. Scrubber 5B line subsequently included in B2-3 hydrotest.
15	Scrubber 6B line - 16" horizontal flanged connection at top of scrubber	Water captured in plastic containment at base of scrubber. 16" flanged connection torqued.
<b>B-3 Test</b>		
16	K9 suction valve - flanged connection	Flanged connection torqued.





Photo #11 – B1 valve insulating flange



Photo #12 – B3 valve insulating flange



Photo #13 – 1B and 2B Scrubber lines flanged connections and orifice meter

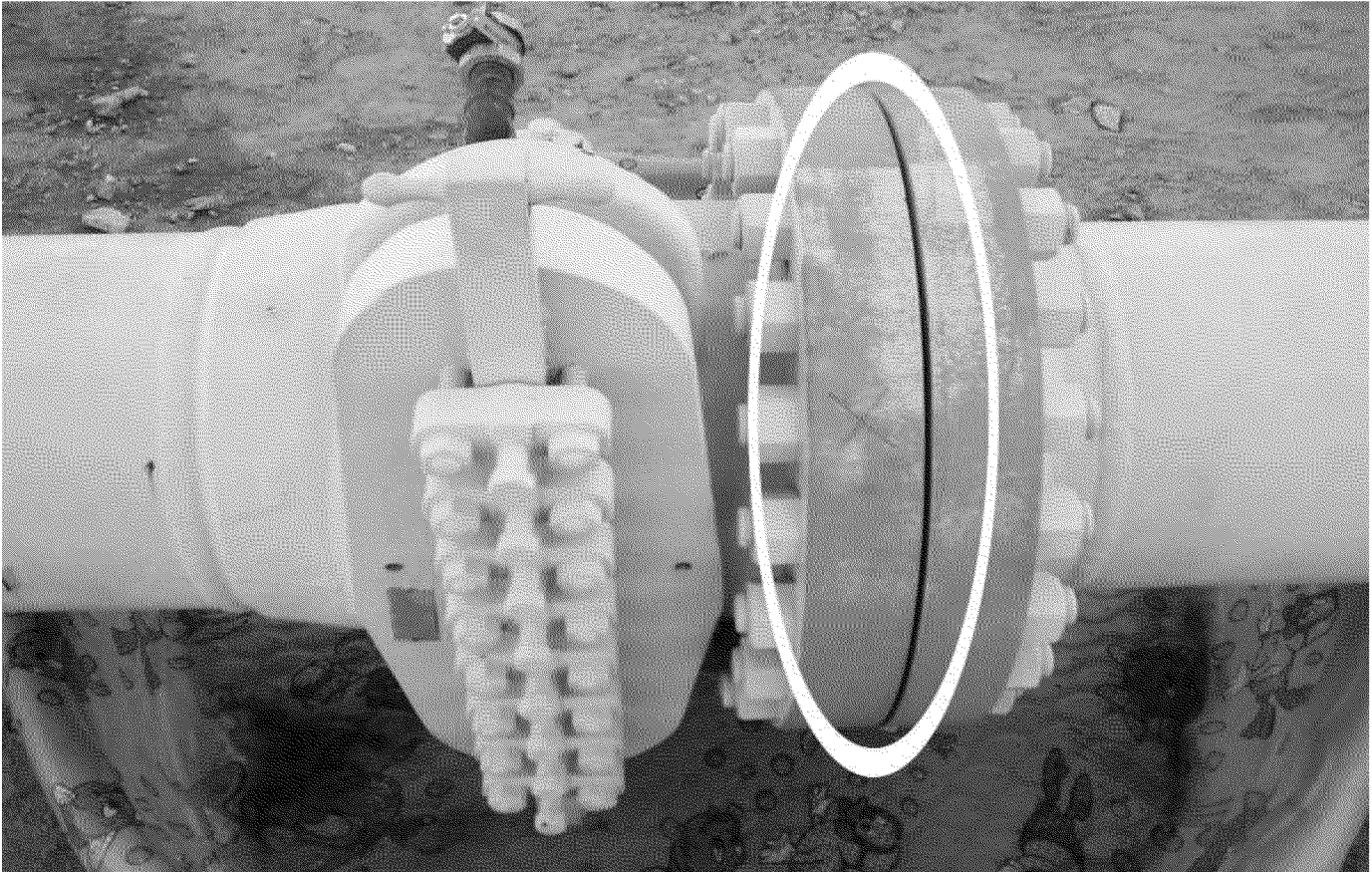


Photo #14 – 2B Scrubber line flanged connection



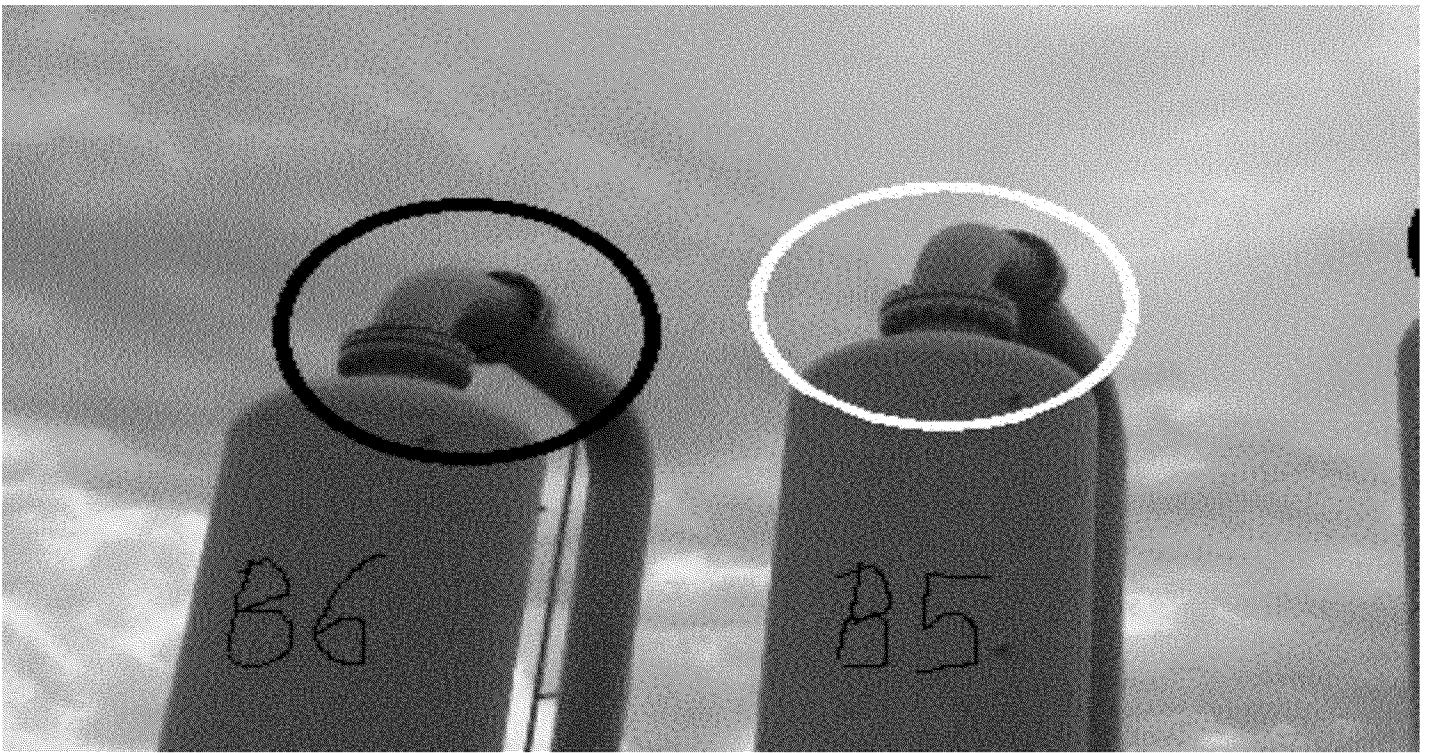


Photo #15 – 5B and 6B Scrubber lines 16” flanged connections

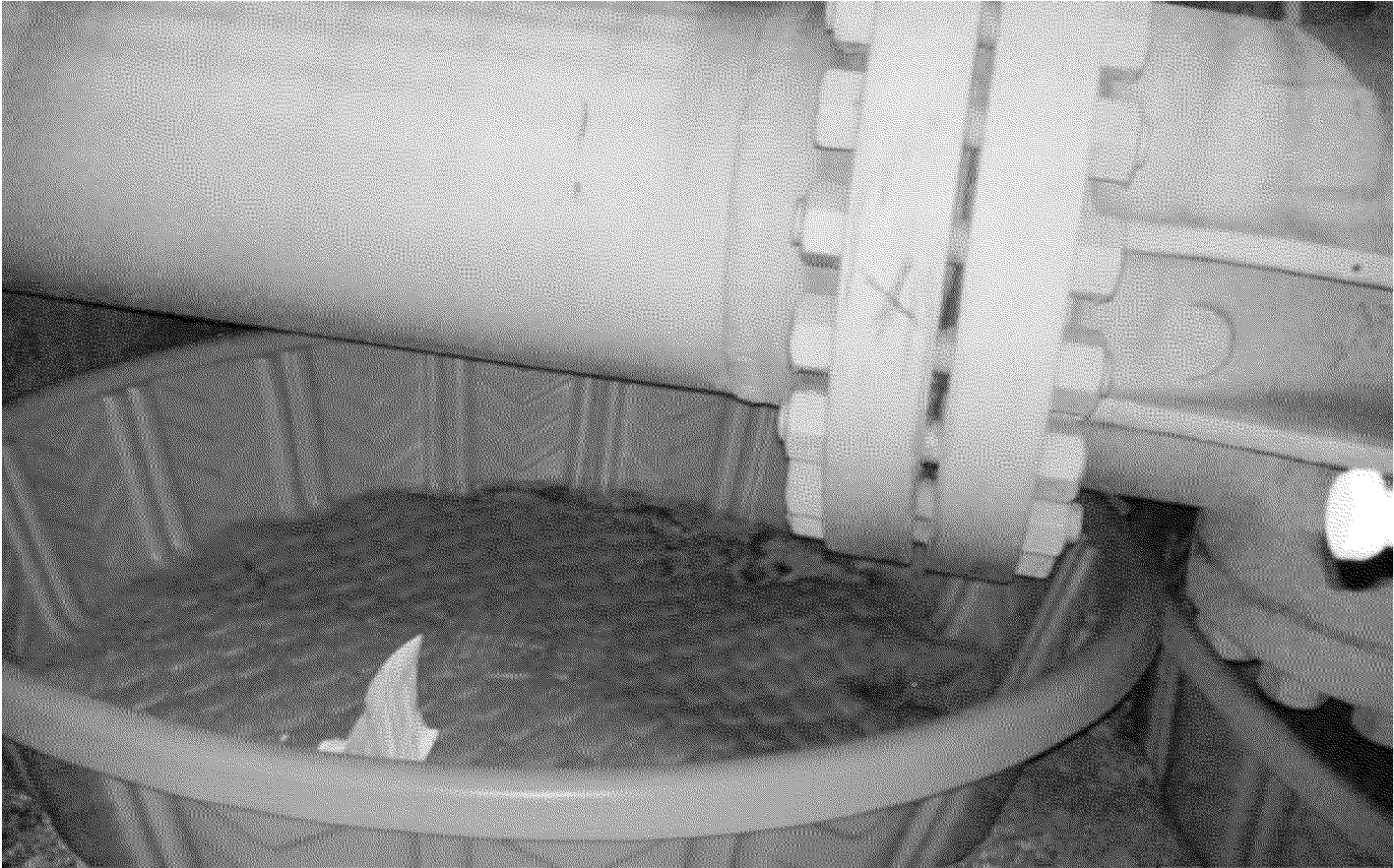


Photo #16 - K9 suction valve flanged connection